#2 11-19-03 jwl

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/604,307	06/27/2000	Stephen James Crampton	990401CIP2/TL	5281-3P1CP2

7590 11/19/2003

EXAMINER	
NGUYEN, KIMBINH T	

ART UNIT	PAPER NUMBER
2671	5

DATE MAILED: 11/19/2003

Frishauf Holtz Goodman Langer & Chick P C
767 Third Avenue
New York, NY 10017-2023

RECEIVED
NOV 21 2003
PG

5281-3P/CIP2

A 19 Feb 2004
Docked FAX TRANSMITTAL

due Feb 19.04

Please find below and/or attached an Office communication concerning this application or proceeding.

P05330U801

Office Action Summary	Application No.	Applicant(s)	
	09/604,307	CRAMPTON, STEPHEN JAMES	
	Examiner	Art Unit	
	Kimbinh T. Nguyen	2671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 June 2000*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-159* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *87,89,92,93,95,97-102,114,117-140 and 143-147* is/are allowed.

6)☒ Claim(s) *1-86,88,90,91,94,96 and 149-159* is/are rejected.

7)☒ Claim(s) *103,115,116,141 and 142* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4*.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Claims 1-159 are pending in the application.

5281-3P/CIP ABD

Double Patenting

2. Claims 1-96 of this application conflict with claims 1-96 of Application No.09/338941. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

3. Claims 1-96 provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-96 of copending Application No.09/338,941. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim Objections

4. Claims 115, 116, 141 and 142 objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claims (claims depend upon two independent claims). See MPEP § 608.01(n). Accordingly, the claims 115, 116, 141 and 142 not been further treated on the merits.

5. Claim 103 objected to because of the following informalities: line 24, after "clothing" should place a semicolon. Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akimoto et al. "Automatic Creation of 3D Facial Models", IEEE, published 1993, pages 16-22 in view of Tang et al. "Automatic construction of 3D human face models based on 2D images", IEEE, published Sept. 1996, pages 467-470.

Claim 1, Akimoto et al. discloses storing a computer model of a generic person (see "Feature extraction" and "Acquisition of input images", page 17); generating model of a person in poses (generating 3D model of a specific person that includes 3D shape data for the surface, eye, eyelids, teeth, lips and tongue, see page 16); obtaining data of

an individual (prototype model of a specific person, page 16 "Our approach"), external appearance of the pose (outward shapes of human bodies, see page 16, the last paragraph of left column); the pose adopted by an individual in the input data (template-matching, see "Profile analysis", page 17); Akimoto does not teach comparing and generating of the individual in different poses; however, Tang et al. teaches multiresolution template and comparing individual in different features; generating of the individual in different poses and in accordance with the comparison means (see sections 2.1, 2.2and 2.3, pages 468-469). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the multiresolution template (comparing) as taught by Tang's method into 3D facial models taught by Akimoto for generating the individual in different poses which based on the comparing the data, because utilizing template matching, it would develop an automatic facial feature extraction and model mapping algorithm to build 3D face model (see section 1. Motivation).

8. Claims 2-9, 11, 13-21, 25, 31, 32, 69, 70, 157 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akimoto et al. "Automatic Creation of 3D Facial Models", IEEE, published 1993, pages 16-22 in view of Tang et al. "Automatic construction of 3D human face models based on 2D images", IEEE, published Sept. 1996, pages 467-470 and further in view of Stenstrom et al. "Constructing Object Models from Multiple Images", published 1992.

Claims 2-9, 11, 13-21, 25, 31, 32, 69, 70, 157, Akimoto et al. discloses an outline of the individual pose (chin outline estimation, fig. 1); calculating the pose adopted

(adjusted) of the external appearance (see section "Model modification, pages 19-20); identifying points on the surface (the model defines several points for controlling the motion and shape of the parts, see section "Generic head model", page 19); Akimoto does not teach laser stripe scanning; however, Stenstrom et al. discloses laser stripe (page 193, the first paragraph of the left column); digital camera (page 193); the luminance or change of luminance of portions of the images (page 193, fig. 6); obtaining weight data (closed-edge pixel contours by cycles of edges in the image) of an individual (locate 1-cycles from the image edges, extrude 1-cycles into cycle volumes: z values (see section 8.2), generating model by comparison the volume of model of a generic person scaled to occupy a volume the expected volume of a individual model (see abstract); projecting structured light (orthogonal projection; section 8.1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the laser stripe taught by Stenstrom into Akimoto's method for utilizing laser stripe function, digital camera, because it would calibrate a system at different distances from camera to construct models from multiple range and intensity images (abstract).

9. Claims 10, 12, 22-24, 30, 33, 34, 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akimoto et al. "Automatic Creation of 3D Facial Models", IEEE, published 1993, pages 16-22 in view of Tang et al. "Automatic construction of 3D human face models based on 2D images", IEEE, published Sept. 1996, pages 467-470 and further in view of Stenstrom et al. "Constructing Object Models from Multiple Images", published 1992 and Blank (5,577,179).

Claims 10, 12, 34, Blank discloses the preselected background comprises a light box, a floor, back wall and roof (X-Y plane), lighting conditions; two foot marks for indicating where an individual should place their feet when adopting the pose (abstract and fig. 1); remove data representative of parts of a pose which corresponds to parts of another pose (col. 2, lines 61-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the preselected background taught by Blank into Akimoto's method for determining the background to edit a digital image, because it would be desirable to provide a natural appearance for the resultant composite image (col. 3, lines 14-15).

Claims 22-24, 30, 33, 71, Tang et al. discloses comparing data points on the surface of the model of a person and data of the input means; comparing relative positions of the body parts of an individual relative to the model of the person (section 2.3, page 469); the body parts comprises eyes, nose, ears, mouth (section 2, page 467); texture rendering (texture mapping is performed to achieve realistic results, see abstract and section 3.2); identifying the same points on the surface ("global-to-local matching", see section 2, pages 467-468, figs. 2 and 3).

10. Claims 26-29, 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akimoto et al. "Automatic Creation of 3D Facial Models", IEEE, published 1993, pages 16-22 in view of Tang et al. "Automatic construction of 3D human face models based on 2D images", IEEE, published Sept. 1996, pages 467-470 and further in view of Lee et al. "Realistic Modeling for Facial Animation", published 1995.

Claims 26-29, 35, Lee et al. discloses predefined number of points on the surface (generic mesh, see section 1.1, section 2) of computer wire mesh model (topographic map) which connecting points on surface of the generic model; comparing points on the surface of an individual data relative to points of a generic person (face) (see section 2 "Generic Face Mesh and Mesh Adaptation"); storing data of a sequence animation instructions (see abstract and section 5) and displaying model (see section 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of generic face mesh and topographic map taught by Lee into the Kim's method for generating face mesh model, because by the adapting a generic face mesh to the data, it is significantly improved meshing techniques.

11. Claims 36-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akimoto et al. "Automatic Creation of 3D Facial Models", IEEE, published 1993, pages 16-22 in view of Tang et al. "Automatic construction of 3D human face models based on 2D images", IEEE, published Sept. 1996, pages 467-470 and further in view of Clanton, III et al. (5,524,195).

Claims 36-38, Clanton, III et al. discloses inputting model data (col. 2, lines 57-59); transmitting the model data to a server (col. 7, lines 45-48); a printer for printing a hard copy (col. 8, line 18); recording (col. 6, lines 39-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the computer and multimedia system taught by Clanton into Kim's method for transmitting data into the server, because it would improve graphical user interface for displaying, transmitting and selecting data (col. 2, lines 39-40).

Claims 39-68, the rationale provided in the rejection of claims 1-39 is incorporated herein.

12. Claims 72-77, 79-84, 88, 94, 153-154, 159 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. (5,696,995).

Claims 72-77, 79-84, 88, 94, 153-156, 159, Huang et al. discloses one booth (an automatic photography booth) adapted for receiving a person (col. 3, lines 46-57); obtaining an image of a person in the booth (col. 4, lines 31-39; col. 10, lines 51-54)); creating a 3D computer model from the image (col. 10, line 55 through col. 11, line 14); payment (inserts the money) associated with the booth (col. 10, lines 18-25); making the 3D model available in predetermined way upon a payment (col. 10, lines 14-33). Huang does not creating a 3D computer model from the image; however, Huang teaches a method for generating a computerized altered composite image using a booth capturing the images when playing "The Gene Machine" mode showing "Male model, Female model" (col. 10, line 55 through col. 12, line 67); a background comprises a curtain 15 and placed the curtain in tension; a housing extends a curtain; a floor (subject user to sit) extending from the housing which illuminating the background (col. 4, line 57 through col. 5, line 6); the poses comprise utilized within a computer game (col. 4, lines 50-55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the Huang's method for using video model to create a face of a child, because it would provide an improved automatic photography that can produce better pictures (col. 3, lines 46-48). Further Huang also discloses wall (a back wall 101, see col. 8, line 21), lighting (col. 5, lines 10-25), image recording (col. 3, line

20), an audio visual instruction (col. 10, line 20), a dispenser (col. 1, line 15), a storage means (col. 2, lines 62-63); a touch screen (col. 2, line 26).

13. Claim 78 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. (5,696,995) in view of Akimoto et al. "Automatic Creation of 3D Facial Models", IEEE, published 1993, pages 16-22.

Claim 78, Akimoto et al. discloses generating an animation sequence representative of the motion of an individual (generating human image animations... produce animated sequences, see page 16, the left column). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the techniques for generating human-image animation taught by Akimoto into the photographic booth shown by Huang for generating motion of an individual, because it would it would provide a method for creating of a 3D model of a specific person (see page 16).

14. Claims 85, 86, 91 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barwacz et al. (5,986,718).

Claims 85, 86, 91, Barwacz et al. discloses image data of an individual lit from behind (light sources 90a, 90b are provided behind the subject to illuminate backdrop; col. 9, lines 57-58); image of an individual from in front and behind (light sources 80a, 80b: front and 90a, 90b: behind; col. 10, lines 27-32); processing image together (superimposition) foreground lighting to obtain a computer model (col. 9, lines 13-54). Barwacz does not teach a computer model; however, Barwacz teaches a computer system including image processing device (microprocessor), input out devices for

producing a composite image (col. 5, line 45 through col. 6, line 31); therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the computer-executable operating system as taught by Barwacz for obtaining computer model of individual from croma-key and a photobooth, because it would produce a composite image (col. 4, line 5).

Claim 96, the rationale provided in the rejection of claims 85 is incorporated herein.

15. Claims 149 and 158 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Brill et al. (5,937,081) in view of Cone (5,850,222).

Claims 149 and 158, O'Brill et al. discloses designing a clothing item (fig. 10); O'Brill does not teach clothing alters the shape; however, Cone discloses the designed item of clothing alters the shape (shaping the body) and appearance of an individual wearing (col. 7, line 34 through col. 8, line 23); displaying a representation of individual wearing the cloth (abstract); storing data in database (fig. 4); identification data (using VDRS to identify a corresponding point on a tour line (human body) and the 2D shape of clothing; col. 2, lines 17-34). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the method for displaying a graphic image of a person modeling a garment as taught by Cone into the designing clothing item of O'Brill for displaying an image of the person wearing a selected garment, because it would provide an accurate representation of what the person would look like wearing the garment (col. 3, lines 56-58).

16. Claims 150-152 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Brill et al. (5,937,081) in view of Cone (5,850,222) and further in view of Tang et al. "Automatic construction of 3D human face models based on 2D images", IEEE, published Sept. 1996, pages 467-470 and further in view of Clanton, III et al. (5,524,195).

Claims 150-152 are rejected under the same reasons set forth in the rejection of independent claims 149 and 158 above. In addition, texturing rendering as disclosed by Tang et al. (texture mapping is performed to achieve realistic results, see abstract and section 3.2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the texture rendering as taught by Tang's method into the modeling of clothing for rendering modeling image, because performing texture mapping, it would achieve realistic results (abstract)

Allowable Subject Matter

17. Claims 87, 89, 92, 93, 95, 97-102, 114, 117-140, 143-147, allowed.

The following is an examiner's statement of reasons for allowance:

Claims 87, 89 the prior art does not teach dispensing a password, transferring data representative of the computer model on the basis of receipt of the password.

Claims 92 and 93, the prior art does not teach obtaining image data within the booth in four orthogonal poses.

Claims 95, 122, the prior art does not teach obtaining image data of an individual seated in a wheelchair; generating a computer model of an individual seated in a wheelchair on the basis of the image data.

Claims 114 and 140, the prior art does not tech obtaining model of individual in the absence of clothing in which clothing items alter the appearance of individual

Claim 97, 127, the prior art does not teach obtaining image data of an individual wearing clothing, some of the surface of the individual is not covered by clothing; generating model of the individual not covered by clothing to generate a portion covered by clothing; determining skin tone color the portion not covered by clothing of either the face or hands of the individual.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kimbinh Nguyen** whose telephone number is **(703) 305-9683**. The examiner can normally be reached **(Monday- Thursday from 7:00 AM to 4:30 PM and alternate Fridays from 7:00 AM to 3:30 PM)**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Zimmerman, can be reached at (703) 305-9798.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Part II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

November 17, 2003

Kimbinh Nguyen

Patent Examiner AU 2671